

What is claimed is:

1. An oil seal arrangement for a casing in which oil is filled and positive and negative oil pressures are alternately produced, said oil seal arrangement comprising a high-pressure seal and a low-pressure seal provided in this turn for preventing oil in said casing from leaking to outside, characterized in that an oil seal chamber is provided between said high-pressure seal and said low-pressure seal, said oil seal chamber containing oil of the same quality as the oil in said casing.

2. The oil seal arrangement claimed in claim 1 wherein said oil seal chamber is not filled with said oil but an oil layer and an air layer are present in said oil seal chamber.

3. The oil seal arrangement claimed in claim 1 or 2 further comprising a recess chamber formed in the outer periphery of said casing around said oil seal chamber, a first passage through which said recess chamber communicates with said oil seal chamber, and an oil injection port communicating with said recess chamber.

4. The oil seal arrangement claimed in claim 3 wherein said first passage is always submerged in said oil

layer.

5. The oil seal arrangement claimed in claim 3 wherein said oil seal chamber and said recess chamber have both an oil layer and an air layer, said first passage is formed at a portion submerged in said oil layers of said oil seal chamber and said recess chamber, and a second passage through which said oil seal chamber communicates with said recess chamber is formed at a portion communicating with said air layers of said oil seal chamber and said recess chamber.

6. The oil seal arrangement claimed in any of claims 1-5 wherein said casing is a pump cylinder, a motor mounted in said pump cylinder, said rotary shaft extending from said motor into said pump cylinder, a pump unit driven by said motor to suck and discharge oil from and into said pump cylinder, said oil seal chamber being provided between said pump and said motor around said rotary shaft, said high-pressure seal being disposed between said pump and said oil seal chamber, said oil seal chamber disposed between said high-pressure seal and said low-pressure seal around said rotary shaft, and said low-pressure seal being disposed between said oil seal chamber and said motor around said rotary shaft, said oil seal chamber being filled with such an amount of oil that said

rotary shaft will be completely submerged in the oil in said oil seal chamber, said oil being of the same quality as the oil in said pump cylinder.